

[0061] Referring now to Fig. 2, there is shown an example of keyboard 101. Keys 201 and 202 are provided for entry of alphabetic and punctuation data. Keys 201 and 202 contain multiple values, so that when a user presses one of keys 101 or 102, a primary value (usually a letter of the alphabet) may be entered, or a secondary value (usually a number or punctuation symbol) may be entered. For example, the 'E' key has a secondary value of '\$', so that when a user presses this key, either an 'E' or a '\$' is entered. The selection of which value to enter may depend upon the context of the entry, or the field being filled, or on any other factors. Alternatively, the user may explicitly select the secondary value by 1) pressing option key 205 before pressing key 201 or 202, or by 2) holding down option key 205 while pressing key 201 or 202. Thus, if the user wishes to enter a '\$', he or she would press option key 205, followed by the 'E' key. Additionally, in one embodiment, if option key 205 is pressed twice, an "option lock" mode is engaged, wherein any number of subsequent keystrokes activate their secondary values until option key 205 is pressed again to deactivate the "option lock" mode.

[0062] Shift key 206 also modifies the value entered by a keystroke. In some contexts, the user can enter an uppercase character by 1) pressing shift key 206 before pressing key 201 or 202, or by 2) holding down shift key 206 while pressing key 201 or 202.

[0063] Keyboard 101 also includes backspace key 203, which deletes the most recently entered character, and enter key 204 (also referred to as return key),

which indicates that the user's entry of a keystroke sequence is complete. Enter key 204 may also be used to activate a command or indicate a selection of an on-screen item, as appropriate. Space bar 207 enters a space character, or may be used to activate a command or indicate a selection, depending on the context in which it is used.

[0064] Some keys 202 contain, as one of their multiple values, a numeric value. Accordingly, a user may use keys 202 when direct-dialing a telephone number. Keys 202 are a subset of the total set of keys on keyboard 101. In the example shown, keys 202 are denoted by a semi-oval design that distinguishes them from other keys 201. However, one skilled in the art will recognize that any means for denoting numeric keys 202 may be employed, including but not limited to visual or tactile indicators on or near the particular keys 202. Alternatively, if desired, such keys 102 may be given an appearance that is substantially similar to other keys 201, with no particular indicia for distinguishing them from other keys 201.

Method of Operation

[0065] In one embodiment, the present invention allows the user to dial a number or to perform directory filtering, without specifying in advance which of the two operations is intended.

[0066] In one embodiment, the invention assumes that the user is attempting to perform directory filtering, and displays directory filtering results accordingly.

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As long as the directory filter produces at least one result, the filter results continue to be displayed. If, however, the directory filter produces no results, and the keystroke sequence has a numeric value, then the numeric value of the keystroke sequence is displayed instead of directory filtering results. Thus, the invention switches to displaying dialed numbers if it becomes evident that the user is performing a direct-dial operation.

[0067] In another embodiment, the invention assumes that the user is attempting to perform a direct-dial operation, and displays dialed numbers. As long as the user continues to enter keystrokes that have numeric values, the numeric sequence continues to be displayed. If, however, the user enters a keystroke having no numeric value, and the keystroke sequence corresponds to a lookup string that generates filter results, then the filtered directory results are displayed instead of the numeric value of the keystroke sequence. Thus, the invention switches to displaying filtered directory results if it becomes evident that the user is performing a directory lookup operation.

[0068] In yet another embodiment, the invention concurrently displays numeric values corresponding to a dialed number, along with directory filtering results corresponding to the text values of the user's keystrokes. If the first keystroke has a numeric secondary value, that numeric value is displayed. If subsequent keystrokes also have numeric secondary values, those numeric values continue to be displayed. As long as the directory filter produces results and all entered keystrokes have numeric values, both the filter results and the numeric